

NEW RECORDS OF *DEMANIA* (CRUSTACEA : DECAPODA : XANTHIDAE) FROM AUSTRALIA

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Three species of *Demania*, *D. splendida* Laurie, 1906, *D. wardi* Garth and Ng, 1985, and *D. cultripes* (Alcock, 1898) are recorded from Australia for the first time. *D. macneilli* Garth, 1976, previously recorded from northern Queensland, is considered a junior synonym of *D. cultripes*. The first male gonopod of *D. wardi* is figured for the first time. *D. splendida* is recorded from the Pacific Ocean for the first time.

□Crustacea, Decapoda, Xanthidae, *Demania*, new records, Australia.

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While I was examining the Australian Xanthoidea — a project sponsored by a grant from the Australian Biological Resources Study - a number of specimens of *Demania* were found. Crabs of this genus are known to contain strong toxins and to have caused several deaths in the Philippines (see review by Llewellyn and Davie, 1987). Because only *D. macneilli* Garth, 1976, has been previously recorded from Australia, the present records are noteworthy.

Measurements are of carapace breadth. QM = Queensland Museum, WAM = Western Australia-

lian Museum, NTM = Northern Territory Museum, QFS = Fisheries Research Branch, Department of Primary Industries. Drawings were made with the aid of a drawing tube.

***Demania splendida* Laurie 1906**
(Figs 1, 2, 3a-c)

Demania splendida Laurie, 1906, p. 397, pl. 1, fig. 8, pl. 2, fig. 1; Serène, 1969, pp. 1-2, fig. 1, pl. 1A-E; 1984, p. 190, fig. 109, pl. XXVID; Guinot, 1979, p. 58, fig. 17A, pl. 4, figs 1-3.



FIG. 1. *Demania splendida* (♂, QM W12094). Scale in mm.

MATERIAL EXAMINED

WAM 448-87, 1♀ (33.6mm), NW Cape Inscription, Shark Bay, WA, Honolulu dredge, 40-42 fathoms, sand, Royce on 'Davena', 15.v.1960. WAM 449-87, 1♂ (26.0mm), NW of Dampier, WA, 42-47 fms, trawled C. Ostie, 1978. QM W12140, 1♀ (29.9mm), trawled 'Soela', NW Shelf, NWA, 19°56.8'S, 117°03.5'E, CSIRO, 25.vi.1983. QM W12094, 1♂ (35.6mm), E of Slashers Reefs, Qd, 18°30'S, 147°16'E, trawled 62m, QFS, 8.v.1985.

REMARKS

The specimens examined above are indistinguishable from the descriptions and figures of *D. splendida* provided by other authors except for the form of the tip of the first male gonopod. Both Serène's (1969, 1984) figures show the apex to bear two stiff hairs, a feature unique amongst the *Demanian* species. Both males of the present series are similar in bearing 10-12 long feathered hairs, more like other species. This feature in itself did not seem sufficient to warrant giving them specific or subspecific rank particularly when such little material has been studied and given the rather labile state of recent *Demanian* taxonomy. The large Queensland male has retained vestiges of the live colour pattern with various sized pink spots on the carapace and dorsal surface of legs and chelae as shown in the accompanying figure.

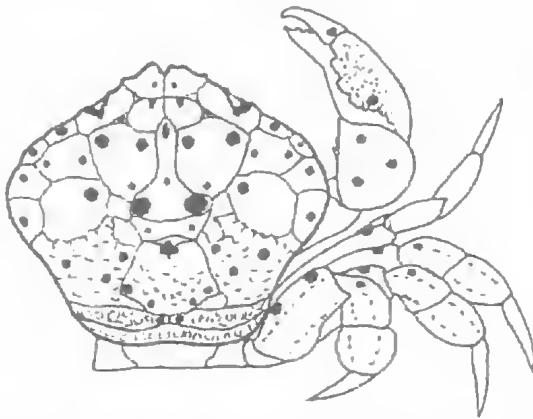


FIG. 2. *Demanian splendida* (♂, QM W12094) showing live colour pattern of reddish-pink spots.

DISTRIBUTION

These records considerably extend the known range from Madagascar to Australian east Indian Ocean waters, and to the Pacific in northern Queensland.

HABITAT

The present specimens were all trawled in depths of about 60-90m, one being recorded as coming from a sandy substrate.

Demanian wardi Garth and Ng, 1985
(Figs 3d-g, 4)

Demanian wardi Garth and Ng, 1985, pp. 294-6, pl. 1A, B, 2A, B.

Demanian rotundata: Mallick and Greenbaum, 1975 (not seen, cited in Garth and Ng, 1985).

MATERIAL EXAMINED

QM W12310, 1♂ (39.4mm), trawled R.V. 'Soela', 40 km ENE Britomart Reef, NEQ, 18°07'S, 147°11'E, 200m, 9.xii.1985, P. Davie. QM W12311, 1♂ (48.6mm) 1♀ (45.9mm), trawled R.V. 'Soela', 100 km E of Dunk Island, NEQ, 17°59'S, 147°06'E, 295m, 9.xii.1985, P. Davie. QM W3160, 1♂ (50.7mm), trawled 110m, E of Caloundra, SEQ, April 1969.

REMARKS

The specimens agree in most respects with the description given by Garth and Ng (1985) of the holotype. The posterior and postero-lateral regions can be better described as being covered in rounded tubercles rather than being squamous. The female holotype is a somewhat larger specimen than those in the present collection and it is likely that the posterior tubercles become squamous on large females (as is the case in *D. cultripes*). The basal part of the cutting edges of the chelipeds are cut into distinct teeth in the present specimens. Apparently the straight, untoothed condition of the holotype female is a function of size. The male first pleopod is figured here for the first time. Although it does differ slightly from that figured for *D. rotundata* by Garth and Ng (1985) it is of doubtful use in separating the two species. Only a small twist of the tip of the pleopod would be needed to make it indistinguishable from Garth and Ng's figure of *D. rotundata*. The smaller males first gonopod differs from the larger by having the tip much straighter and not yet sharply curved back on itself.

DISTRIBUTION

Suva, Fiji (Garth and Ng, 1985) and now from off Queensland. It has also been reported from the New Hebrides as a Pleistocene fossil (as *D. rotundata*) in Mallick and Greenbaum (1975).

HABITAT

Appears to be a moderately deep water species (110-400m).

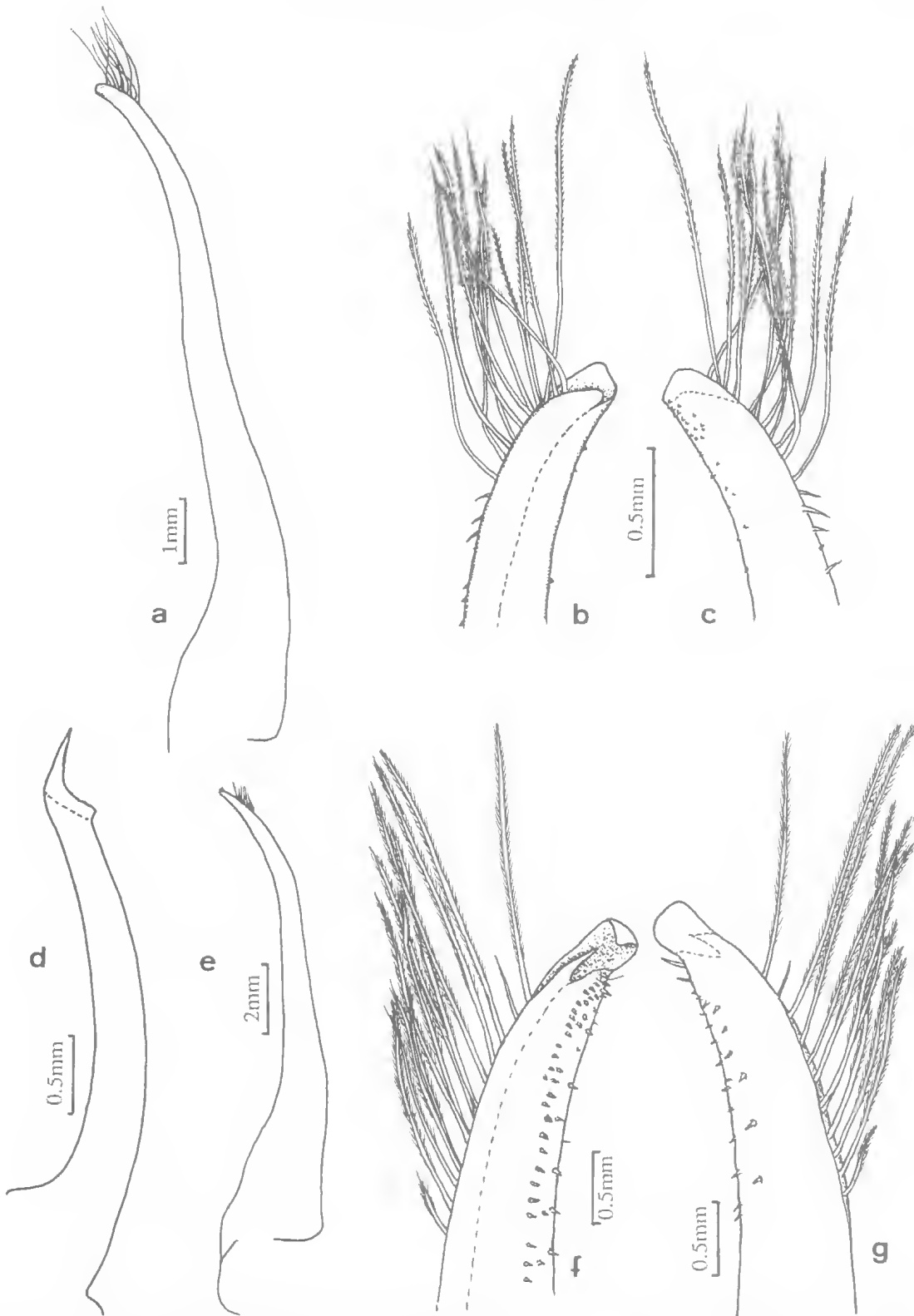


FIG. 3. a-c, *Demania splendida*, first male gonopod (QM W12094), d-g, *Demania wardi* (QM W12311), d, second male gonopod, e-g, first male gonopod.

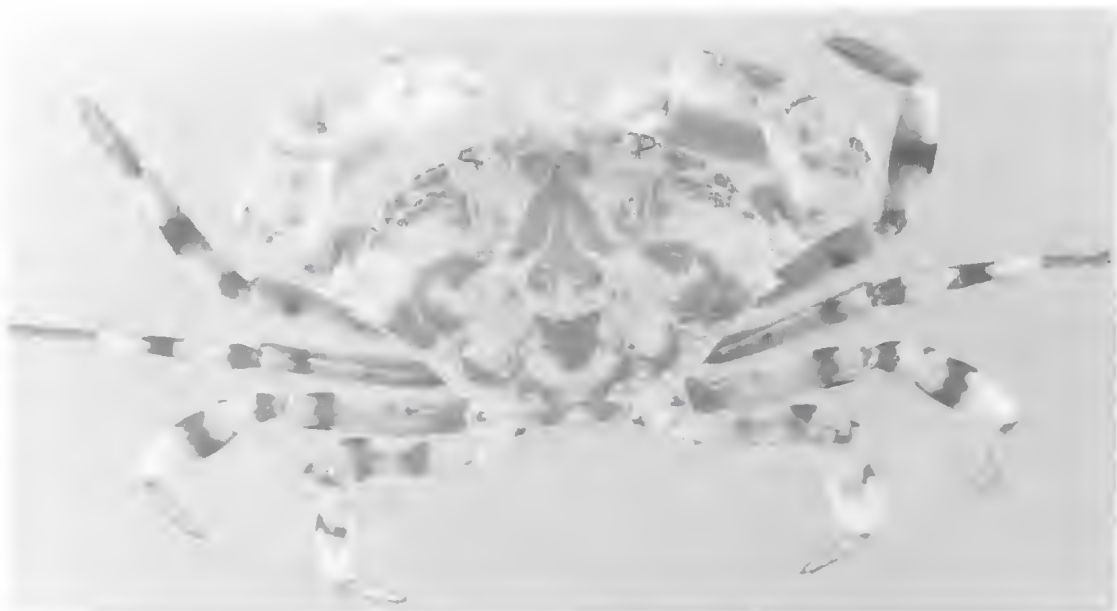


FIG. 4. *Demania wardi* (♂, QM W14943), showing live colour pattern. Carapace breadth = 55.4mm.

***Demania cultripes* (Alcock, 1898)**
(Fig. 5)

Xantho (Lophoxanthus) scaberrimus var. *cultripes*
Alcock, 1898, p. 117.

Demania scaberrima cultripes: Guinot, 1969, p. 235.

Demania cultripes: Guinot 1979, p. 61, pl. 4, figs 7,8;
Garth and Ng, 1985, pp. 299-302, pl. 4, figs 2A-C,
4.

Demania alcalai Garth, 1975, pp. 2-6, fig. 1.

Demania macneilli Garth, 1976, pp. 113-117, fig. 1A-F.
For full synonymy see Garth and Ng (1985).

MATERIAL EXAMINED

QM W14942, 1♀ (63.6mm), Trawled 'Southern Intruder' inside Swain Reefs, 22°14'S, 152°27'E, 60m, 2.xi.1983, QFS. QM W14943, 1♂ (55.4mm), trawled ENE of Palm Island, 18°38.2'S, 146°51.4'E, 40m, 28.ix.1986, QFS. QM W12312, 1 ovig.♀ (65.0 mm), 90 km E of Lucinda, NEQ, 56m, 16.iv.1985, QFS. QM W12313, 1 juv.♀ (31.2mm), near John Brewer Reef, 18°47'S, 147°03'E, 45m, 21.vii.1985, QFS. QM W12314, 1♂ (56.3mm), Cape Melville, SE of Pipon Island, 18m, 17.ii.1982, QFS. QM W9943, 1♀ (62.2mm), 25 km W Lizard Island, NEQ, 14°38.5'S, 145°13'E, 13.5m, 18.ix.1979, QFS. NTM Cr 3244, 1♂ (52.4mm), Arafura Sea, 10°07.5'S, 136°44.0'E, 51-57m, 17.iii.1985, W. Houston.

REMARKS

When *D. macneilli* was described *D. cultripes* was still poorly known, but since the redescription by Garth and Ng (1985) it is clear that they can no

longer be justifiably separated. *D. macneilli* was said to differ from *D. cultripes* by the degree of prominence of the tubercles at the inner angle of the wrist and near the base of the pollex; and by the raised rows of granules on the dorsal surfaces of the leg joints being obsolete rather than obsolescent. The present specimens show perfect conformity to the chelae characters described and illustrated for *D. cultripes* by Garth and Ng (1985), and the granulation on the legs varies between specimens from obsolete to clearly obvious. The immature female (W12313) is distinctly more coarsely granulate than the other specimens and the male specimens are also more granulate than the females, especially towards the posterior half where the tubercles are more prominent and rounded rather than being squamous as in the females. The male specimen from the Arafura Sea (NTM Cr 3244) is slightly unusual in having the third antero-lateral tooth noticeably upturned rather than projecting flatly. Figure 3 shows the colour pattern which persists as a pinky orange on preserved specimens.

DISTRIBUTION

Singapore (Alcock, 1898; Garth and Ng, 1985), Philippines (Garth, 1975; Garth and Ng, 1985), New Caledonia (Guinot and Richer de Forges, 1981), Arafura Sea, northern Australia, and eastern Australia south to Gladstone (Garth, 1976 and present paper).

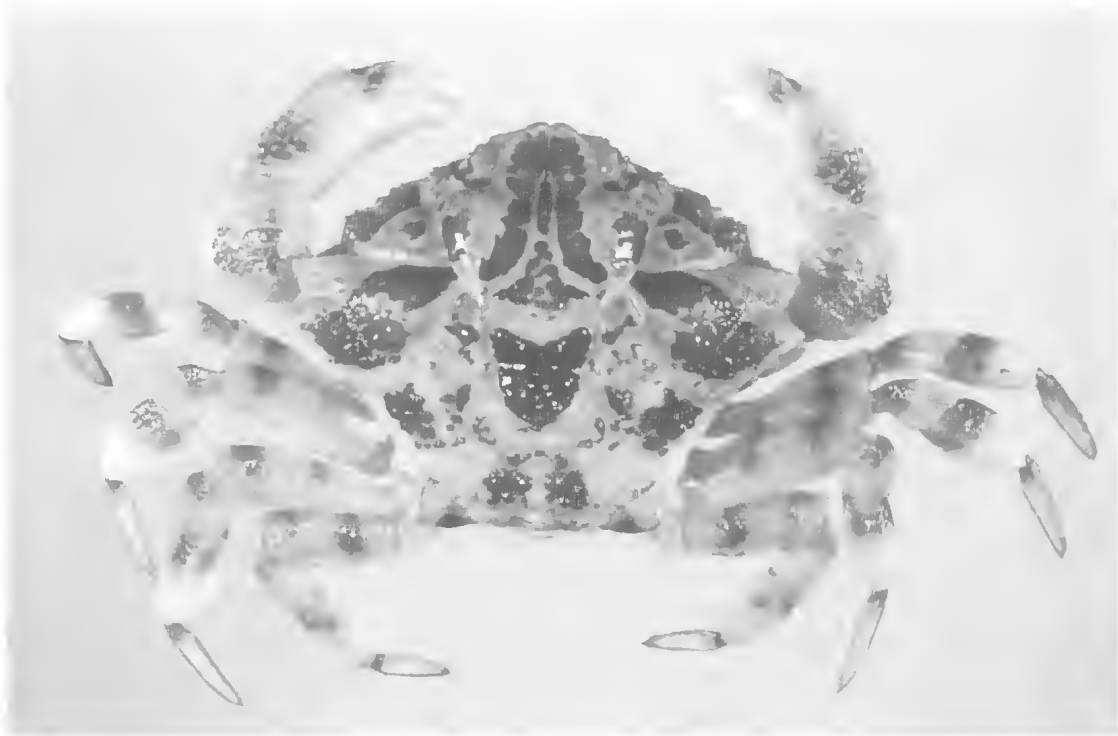


FIG. 5. *Demania cultripes* showing live colour pattern (Courtesy Fisheries Research Branch, Department of Primary Industries).

HABITAT

In Australian waters they are normally caught as part of the prawn trawlers 'by-catch' and have been taken in depths from 18 to 60 metres. The holotype female of *D. alcalai* from the Philippines was however found in a bamboo fish trap in only 1m of water.

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